

Service Manual

Cassette Deck

RS-M10

Front-Loading Vertical Hold Stereo
Cassette Deck with 3-Position Tape Selector

DOLBY SYSTEM



This is the Service Manual for the following areas.

D For All European areas except United Kingdom.
B For United Kingdom.

RS-631 MECHANISM SERIES

Specifications (Catalog specifications for sales)

Power requirement:	AC; 110/125/220/240V, 50/60Hz 240V, 50Hz only for England	Input:	MIC; sensitivity 0.25 mV, input impedance 33 KΩ, applicable microphone impedance 40 KΩ~10 KΩ
Power consumption:	10W	Output:	LINE; sensitivity 60 mV, input impedance 47 KΩ
Motor:	Electronic control DC motor	LINE;	output level 420 mV, output impedance 1 KΩ or less, load impedance 22 KΩ over
Track system:	4-track 2-channel stereo recording and playback	HEADPHONE;	output level 65 mV, load impedance 8 Ω
Tape speed:	4.8 cm/s (1-7/8 ips.)	Rec/pb connection:	5 P DIN type; input sensitivity 1 mV, impedance 8.2 KΩ output level 420 mV, impedance 47 KΩ
Wow and flutter:	0.06% (WRMS), ±0.15% (DIN)	Bias frequency:	80 kHz
Frequency response:	CrO ₂ /FeCr tape; 25~15,000 Hz 30~14,000 Hz (DIN)	Head:	2-head system; 1-SP head for record/playback 1-double-gap ferrite head for erasure
	Normal tape; 25~14,000 Hz 30~13,000 Hz (DIN)	Dimensions:	43.0cm(W)×14.2cm(H)×25.1cm(D) [16-7/8"(W)×5-5/8"(H)×9-7/8"(D)]
Signal-to-noise ratio:	Dolby* NR in; 66 dB (above 5 kHz) Dolby NR out; 56 dB (signal level = max. recording level, FeCr/CrO ₂ type tape)	Weight:	5.0 kg (11 lbs.)
Fast forward and rewind time:	Approx. 86 seconds with C-60 cassette tape		

Specifications are subject to change without notice.

* 'Dolby' and the double-D symbol are trademarks of Dolby Laboratories.

Technics

Matsushita Electric Trading Co., Ltd.
P.O. Box 288, Central Osaka Japan

LOCATION OF CONTROLS AND COMPONENTS

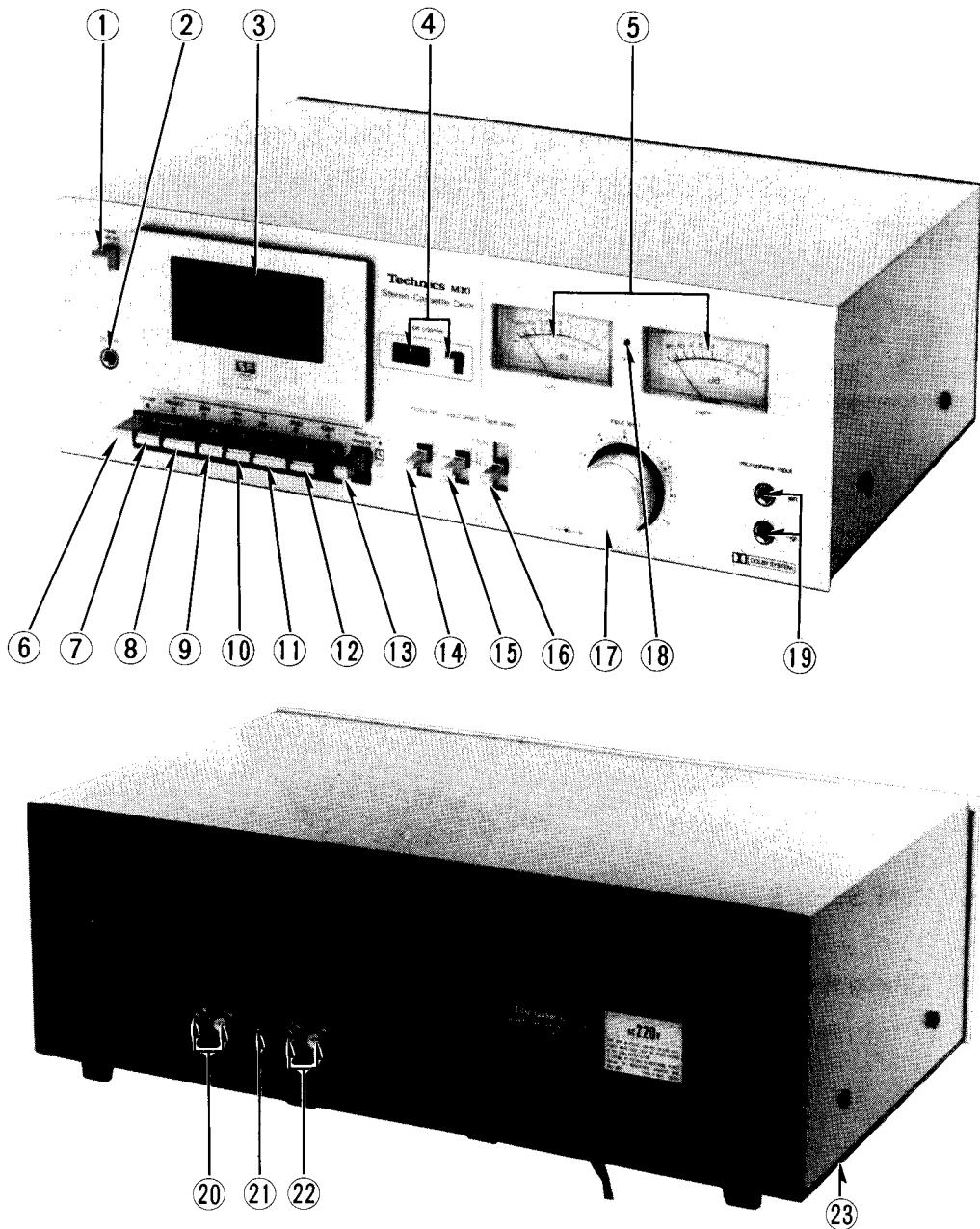


Fig. 1

① Power switch	⑫ Eject button
② Headphones jack	⑬ Timer stand-by button
③ Cassette compartment door	⑭ Dolby noise-reduction switch
④ Tape counter and reset button	⑮ Input selector
⑤ Level meters	⑯ Tape selector
⑥ Pause button	⑰ Input level control
⑦ Record button	⑱ Recording indication lamp
⑧ Playback button	⑲ Microphone input jacks
⑨ Rewind button	⑳ Line output jacks
⑩ Fast forward button	㉑ Record/playback connection socket
㉒ Stop button	㉓ Line input jacks
	㉔ AC power voltage select switch

DISASSEMBLY INSTRUCTIONS

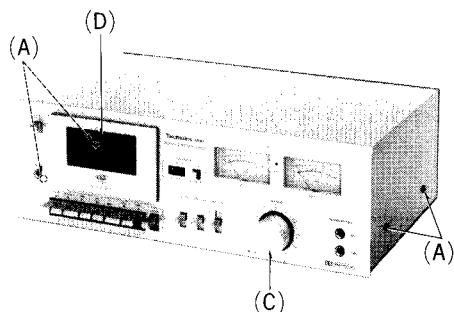


Fig. 2

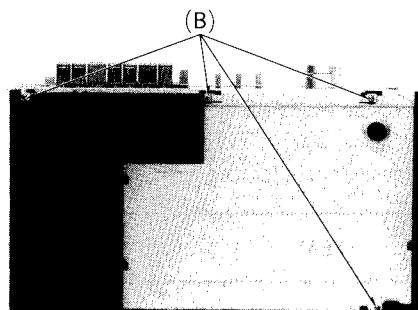


Fig. 3

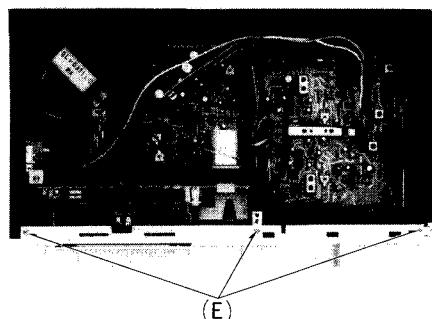


Fig. 4

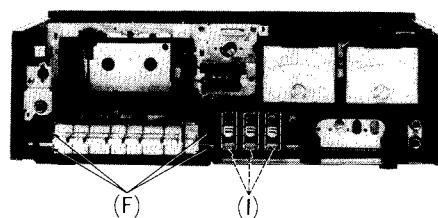


Fig. 5

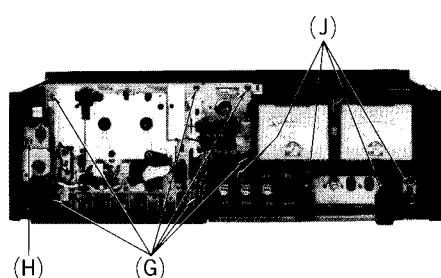


Fig. 6

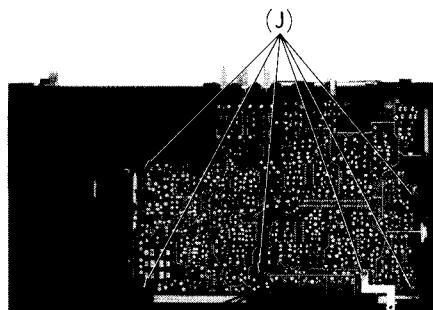


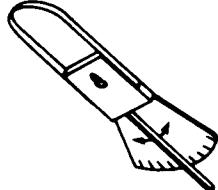
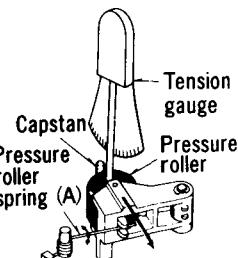
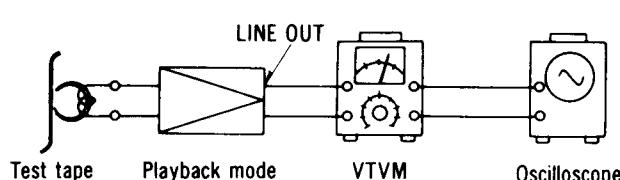
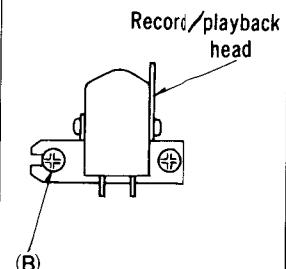
Fig. 7

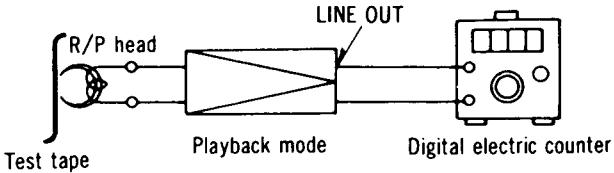
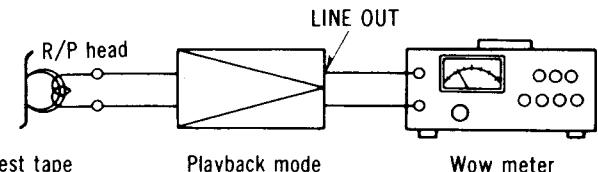
Procedure	To remove	Remove	Shown in fig.
1	Case cover	• 4 black screws (A)	2
2	Bottom cover	• 4 screws (B)	3
3	Front panel	• Control knob (C) • Cassette lid (D) • 3 screws (E)	2 2 4
4	Control button assembly and cassette holder	• 4 red screws (F)	5
5	Mechanism	• 6 red screws (G) • Headphone holding screw (H)	6 6
5	Circuit board	• 3 switch shelters (I) • 10 screws (J)	5 6, 7

MEASUREMENT AND ADJUSTMENT METHOD

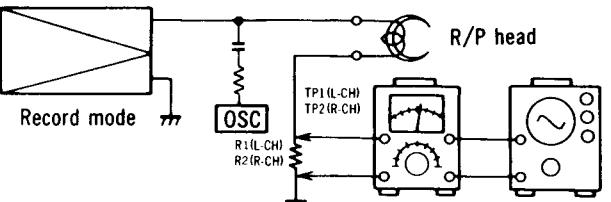
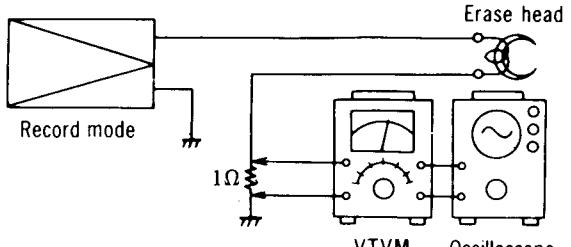
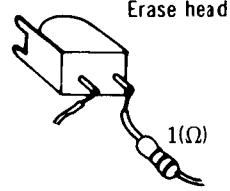
NOTE:

1. Make sure heads are clean.
2. Make sure capstan and pressure roller are clean.
3. Judgeable room temperature: $20 \pm 5^\circ\text{C}$ ($68 \pm 9^\circ\text{F}$).
4. Dolby NR switch: OUT.
5. Tape selector: Normal.

ITEM	MEASUREMENT & ADJUSTMENT	REMARKS
Pressure of pressure roller Equipment: * Tension gauge (max. 500 gr)  <p>Fig. 8</p>	<ol style="list-style-type: none"> 1. Place UNIT into playback mode. 2. Hook the tension gauge to pressure roller lever and pull it in the direction of the arrow as shown in fig. 9. 3. Measure the tension at the moment when the pressure roller moves away from the capstan. <div style="border: 1px solid black; padding: 5px; text-align: center;">Standard value: $350 \pm 50 \text{ gr}$</div> <p>Adjustment method Bend the part (A) of the pressure roller spring in either direction shown by the arrow until the correct pressure is attained.</p>	* Playback mode  <p>Fig. 9</p>
Takeup tension Equipment: * Cassette torque meter ... QZZSRKCT	<ol style="list-style-type: none"> 1. Mount cassette torque meter on UNIT. 2. Place UNIT into playback mode and read takeup torque. 3. Measure several times and determine the mean value. <div style="border: 1px solid black; padding: 5px; text-align: center;">Standard value: $50 \pm 15 \text{ gr-cm}$</div>	* Playback mode
Head azimuth adjustment Equipment: * VTVM * Oscilloscope * Test tape (azimuth) ... QZZCFM	<p>Record/playback head adjustment</p> <ol style="list-style-type: none"> 1. Test equipment connection is shown below.  <p>Fig. 10</p> <ol style="list-style-type: none"> 2. Playback azimuth tape (QZZCFM 8kHz). 3. Adjust record/playback head angle adjustment screw (B) in fig. 11 so that output level at LINE OUT becomes maximum. 4. Measure both channels, and adjust levels for equal output. 5. After adjustment lock head adjustment screw with lacquer. 	* Playback mode  <p>Fig. 11</p>

ITEM	MEASUREMENT & ADJUSTMENT	REMARKS
Tape speed Equipment: * Digital electronic counter or frequency counter * Test tape ... QZZCWAT	<p>Tape speed accuracy</p> <ol style="list-style-type: none"> Test equipment connection is shown below.  <p>Fig. 12</p> <ol style="list-style-type: none"> Playback test tape (QZZCWAT 3,000 Hz), and supply playback signal to frequency counter. Measure this frequency. On the basis of 3,000 Hz, determine value by following formula: $\text{Tape speed accuracy} = \frac{f - 3,000}{3,000} \times 100 (\%)$ <p>where, f = measured value</p> <ol style="list-style-type: none"> Take measurement at middle section of tape. <div style="border: 1px solid black; padding: 2px; text-align: center;"> Standard value: $\pm 1.5\%$ </div> <p>Adjustment method</p> <ol style="list-style-type: none"> Playback the test tape (middle). Adjust so that frequency becomes 3,000 Hz. Tape speed adjustment VR shown in fig. 26. <p>Tape speed fluctuation</p> <p>Make measurements in same manner as above (beginning, middle and end of tape), and determine difference between maximum and minimum values and calculate as follows:</p> $\text{Tape speed fluctuation} = \frac{f_1 - f_2}{3,000} \times 100 (\%)$ <p>f_1 = maximum value f_2 = minimum value</p> <div style="border: 1px solid black; padding: 2px; text-align: center;"> Standard value: 1% </div>	* Playback mode
Wow and flutter Equipment: * Wow meter * Test tape ... QZZCWAT	<ol style="list-style-type: none"> Test equipment connection is shown below.  <p>Fig. 13</p> <ol style="list-style-type: none"> Use wow test tape (3,000 Hz) and measure its playback signal on wow meter. Wow and flutter is expressed in percentage and that measurement can be weighted by JIS network (WRMS). Measure at middle section of test tape. <div style="border: 1px solid black; padding: 2px; text-align: center;"> Standard value: 0.07% (WRMS) </div>	* Playback mode

ITEM	MEASUREMENT & ADJUSTMENT	REMARKS
Playback frequency response Equipment: * VTVM * Oscilloscope * Test tape ... QZZCFM	<ol style="list-style-type: none"> Test equipment connection is as same as "Head azimuth adjustment" but use the test tape (QZZCFM) instead of head azimuth tape (See fig. 10). Place UNIT into playback mode. Playback frequency response test tape. Measure output level at 8kHz, 4kHz, 1kHz, 315Hz, 250Hz, 125Hz and 63Hz and compare output level with standard frequency 315Hz, at LINE OUT. Make measurement for both channels. Make sure that the measured value is within the range specified in the frequency response chart. <p style="text-align: center;">Playback frequency response chart</p>	* Playback mode
Playback gain Equipment: * VTVM * Oscilloscope * Test tape ... QZZCFM	<ol style="list-style-type: none"> Test equipment connection is shown in fig. 10. Playback standard recording level portion on test tape (QZZCFM 315 Hz), and using VTVM measure the output level at LINE OUT jack. Make measurement for both channels. <div style="border: 1px solid black; padding: 2px; text-align: center;">Standard value: 0.39V</div> <p>Adjustment method</p> <ol style="list-style-type: none"> If measured value is not standard, adjust VR3 (L-CH), VR4 (R-CH) (See fig. 26 on page 10). After adjustment, check "Playback frequency response" again. 	* Playback mode
Playback S/N ratio Equipment: * VTVM * Oscilloscope * Test tape ... QZZCFM * Empty cassette	<ol style="list-style-type: none"> Test equipment connection is shown in fig. 10. Playback standard recording level test tape (QZZCFM 315Hz) and read output level on VTVM. Refer to "Playback gain adjustment". Place empty cassette (which has been cut) and playback again. Measure noise level at this time using VTVM, and determine ratio of this level to test tape output signal voltage (315Hz). <div style="border: 1px solid black; padding: 2px; text-align: center;">Standard value: Greater than 45 dB</div>	* Playback mode

ITEM	MEASUREMENT & ADJUSTMENT	REMARKS
Bias current Equipment: * VTVM * Oscilloscope	<p>1. Test equipment connection is shown below.</p>  <p>Fig. 15</p> <p>2. Place UNIT into record mode, and bias selector to "LOW". 3. Read voltage on VTVM and calculate bias current by following formula:</p> $\text{Bias current (A)} = \frac{\text{Value read on VTVM (V)}}{10 (\Omega)}$ <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Standard value: 285μA (Normal position) 340μA (FeCr position) 380μA (CrO₂ position)</p> </div> <p>4. Adjust L5 (L-CH) and L6 (R-CH) (See adjustment parts location on page 10).</p>	<ul style="list-style-type: none"> * Record mode * When bias current is the adjusted on one channel only, note that bias current on the other channel may vary. * When L5 or L6 is the replaced, preset core position to bottom side of coil and then readjust optimum bias current.
Erase current Equipment: * VTVM * Oscilloscope * Resistor (1Ω)	<p>1. Connect 1Ω resistor between the ground side terminal of erase head ground lead wire removed (See fig. 17). 2. Connect VTVM to both ends of 1Ω resistor.</p>  <p>Fig. 16</p> <p>3. Place UNIT into record mode, and measure voltage across the 1Ω resistor. 4. Determine erase current with the following formula:</p> $\text{Erase current (A)} = \frac{\text{Voltage across both ends of } 1\Omega \text{ resistor}}{1\Omega}$ <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Standard value: More than 40mA (Normal position) More than 45mA (FeCr position) More than 55mA (CrO₂ position)</p> </div>	<ul style="list-style-type: none"> * Record mode  <p>Fig. 17</p>

ITEM	MEASUREMENT & ADJUSTMENT	REMARKS
Overall gain Equipment: * AF oscillator * VTVM * ATT * Oscilloscope * Test tape (reference blank tape) ... QZZCRA for Normal	<p>1. Test equipment connection is shown in fig. 18.</p> <p>Fig. 18</p> <p>2. Place UNIT into record mode, and tape selector to normal position. 3. Supply 1kHz signal (-24 dB) from AF oscillator, through ATT, to LINE IN. 4. Adjust ATT until monitor level at LINE OUT becomes 0.39 V (-7 dB). 5. Using test tape, make recording. 6. Playback recorded tape, and make sure the value at LINE OUT on VTVM becomes 0.39 V. 7. If measured value is not 0.39 V, adjust VR5 (L-CH), VR6 (R-CH) (See fig. 26 on page 10). 8. Repeat from step (2).</p>	<ul style="list-style-type: none"> * Record/playback mode * INPUT level control ... MAX * Standard input level: MIC..... $-72 \pm 3\text{ dB}$ LINE IN .. $-24 \pm 3\text{ dB}$ DIN..... $-36 \pm 3\text{ dB}$
Level meter Equipment: * VTVM * Oscilloscope * AF oscillator * ATT	<p>1. Test equipment connection is shown in fig. 19.</p> <p>Fig. 19</p> <p>2. Supply 1kHz signal from the AF oscillator, through the ATT, to the LINE IN jack. 3. Adjust ATT so that the monitor level at LINE OUT becomes 0.39 V. 4. Adjust VR501 (L-CH) and VR502 (R-CH) so that the level meters indicate 0 dB.</p>	<ul style="list-style-type: none"> * Record mode * INPUT level control ... MAX
Overall distortion Equipment: * Distortion meter * AF oscillator * ATT * Oscilloscope * Test tape (reference blank tape) ... QZZCRA for Normal ... QZZCRX for CrO ₂ ... QZZCRY for FeCr	<p>1. Test equipment connection is shown in fig. 20.</p> <p>Fig. 20</p>	<ul style="list-style-type: none"> * Record/playback mode * INPUT level control ... MAX

ITEM	MEASUREMENT & ADJUSTMENT	REMARKS
	<p>2. Supply 1kHz signal to LINE IN and adjust ATT so that output level at LINE OUT indicates 0.39 V.</p> <p>3. Make recording.</p> <p>4. Playback and measure distortion factor of output signal.</p> <p>5. When the distortion factor does not satisfy the standard, check the bias current. When the bias current is lower than standard, distortion will increase.</p> <p>Care should be exercised in the adjustment because the bias current also has an influence on the overall frequency response. Refer to "The overall frequency response" and "The bias current adjustment".</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Standard value:</p> <p>Less than 3.0% (Normal position)</p> <p>Less than 4.0% (CrO₂, FeCr position)</p> </div>	
Overall frequency response	<p>Note:</p> <p>Before measuring, and adjusting, make sure of the playback frequency response (For the method of measurement, please refer to the playback frequency response).</p> <p>1. Test equipment connection is shown in fig. 18.</p> <p>2. Load reference blank test tape and place UNIT into record mode.</p> <p>3. Supply 1kHz signal from AF oscillator through ATT to LINE IN.</p> <p>4. Adjust ATT so that input level is -20dB below standard recording level (standard recording level -24 dB).</p> <p>5. Record each frequency 50Hz, 100Hz, 200Hz, 1kHz, 2kHz, 4kHz, 8kHz and 10kHz (12kHz for CrO₂ and FeCr tape) at the same level.</p> <p>6. Playback and express in dB the difference between playback output level of each frequency based on playback output level of 1kHz.</p> <p>7. Make sure that the measured value is within the range specified in the overall frequency response chart.</p> <p style="text-align: center;">Overall frequency response chart (Normal)</p> <p style="text-align: center;">Fig. 21</p> <p>8. Set the tape selector to CrO₂, FeCr position. 9. Measure as same as manner above. 10. Make sure that the measured value is within the range specified in the overall frequency response chart for CrO₂ and FeCr tape below.</p> <p style="text-align: center;">Overall frequency response chart (FeCr)</p> <p style="text-align: center;">Fig. 22</p>	* Record/playback mode * INPUT level control ... MAX

ITEM	MEASUREMENT & ADJUSTMENT	REMARKS
	<p style="text-align: center;">Overall frequency response chart (CrO_2)</p> <p>The chart shows a flat frequency response from 100Hz to 12kHz. At 8kHz, there is a +4.5dB boost. The response is -3dB at 12kHz.</p> <p style="text-align: center;">Fig. 23</p>	
Overall frequency response adjustment (As a standard for adjustment)	<p>Adjustment 1—Using bias current</p> <ol style="list-style-type: none"> When the frequency response between the middle and high-frequency range becomes higher than the standard value, as shown by the solid line in fig. 24, increase the bias current by turning L5 (L-CH), L6 (R-CH). When it becomes lower, as shown by dotted line, reduce the bias current by turning L5 (L-CH), L6 (R-CH). <p>Note: For the method of bias current measurement, refer to "Bias current adjustment" on page 6.</p> <p style="text-align: center;">Fig. 24</p> <p>Adjustment 2—Using the peaking coil for recording equalization</p> <p>When the frequency response is flat in the middle-frequency range and makes a sharp rise or drop in the high-frequency range, as shown in fig. 25, adjust by turning the peaking coil L3 (L-CH), L4 (R-CH) for normal tape recording equalization.</p> <p style="text-align: center;">Fig. 25</p>	
Dolby NR circuit Equipment: * VTVM * AF oscillator * ATT * Oscilloscope ... QZZCRA	<ol style="list-style-type: none"> Place UNIT into record mode, set the Dolby NR switch to OUT position and supply to LINE IN to obtain -34.5dB at TP3 (L-CH), TP4 (R-CH) (frequency 5kHz). Confirm that the value at IN position is $8(\pm 2.5)\text{dB}$ greater than the value at OUT position of Dolby NR switch. 	* Record mode * INPUT level control ... MAX
Overall S/N ratio Equipment: * VTVM * AF oscillator * ATT * Oscilloscope * Test tape (reference blank tape) ... QZZCRA	<ol style="list-style-type: none"> Test equipment connection is shown in fig. 18. Supply 1kHz signal to LINE IN and adjust ATT so that output level at LINE OUT indicates 0.39V. Make recording. Make another recording without supplying signal (disconnect input plug to LINE IN). Rewind to recorded part and playback. Measure output signal level and no signal level (noise), and determine the ratio in decibels (dB). The value is difference between "Playback S/N and overall S/N", but for decibel calculation refer to "Playback S/N measurement" on page 5. <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> Standard value: Greater than 43dB (without NAB filter) </div>	* Record/playback mode * INPUT level control ... MAX * Erase the tape with a bulk tape eraser.

RS-M10 RS-M10

ADJUSTMENT PARTS LOCATION

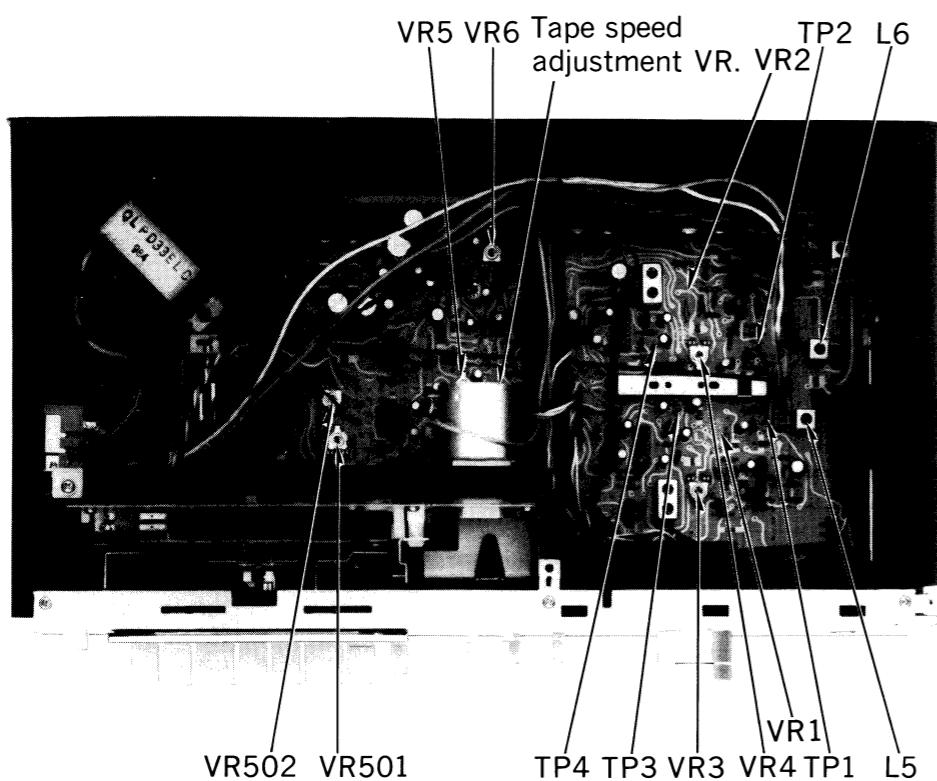
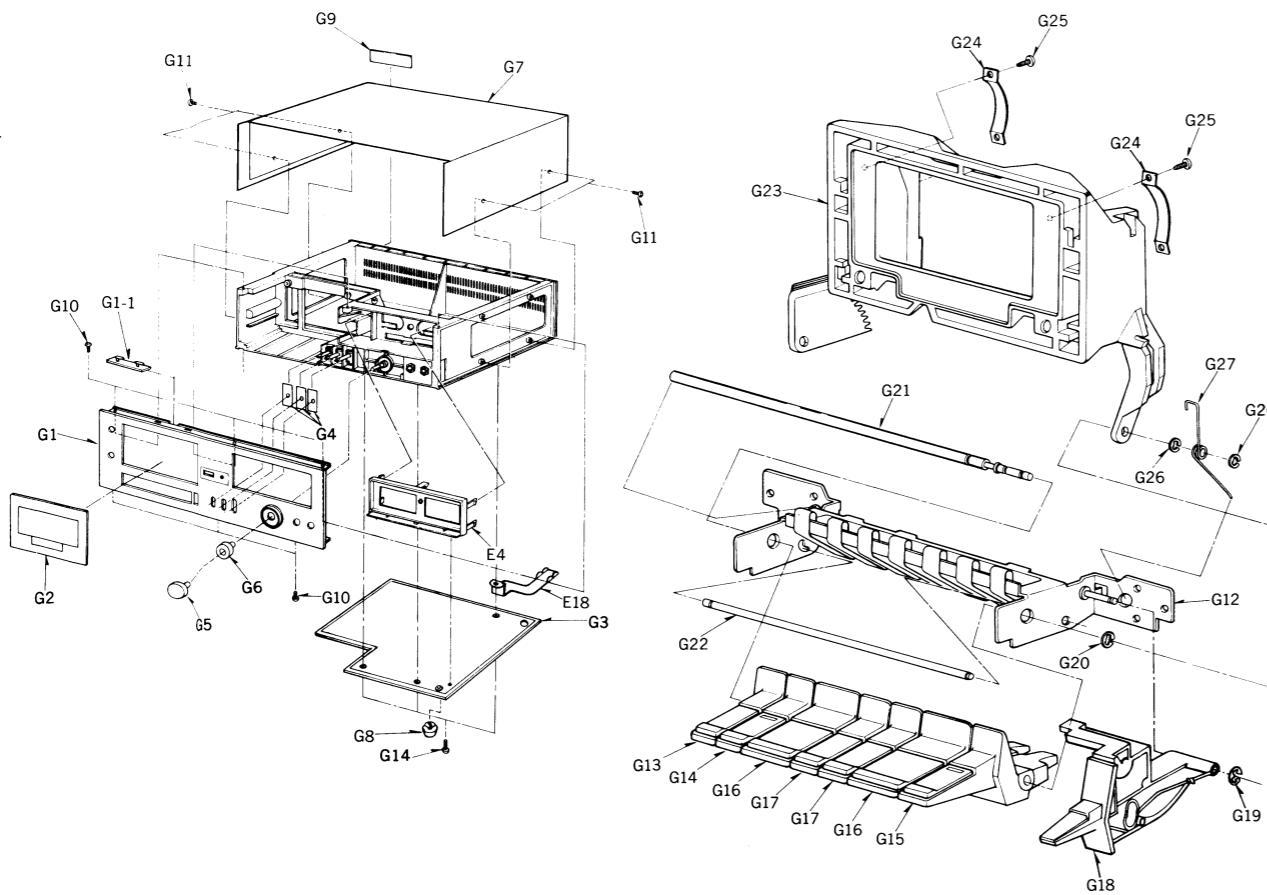


Fig. 26

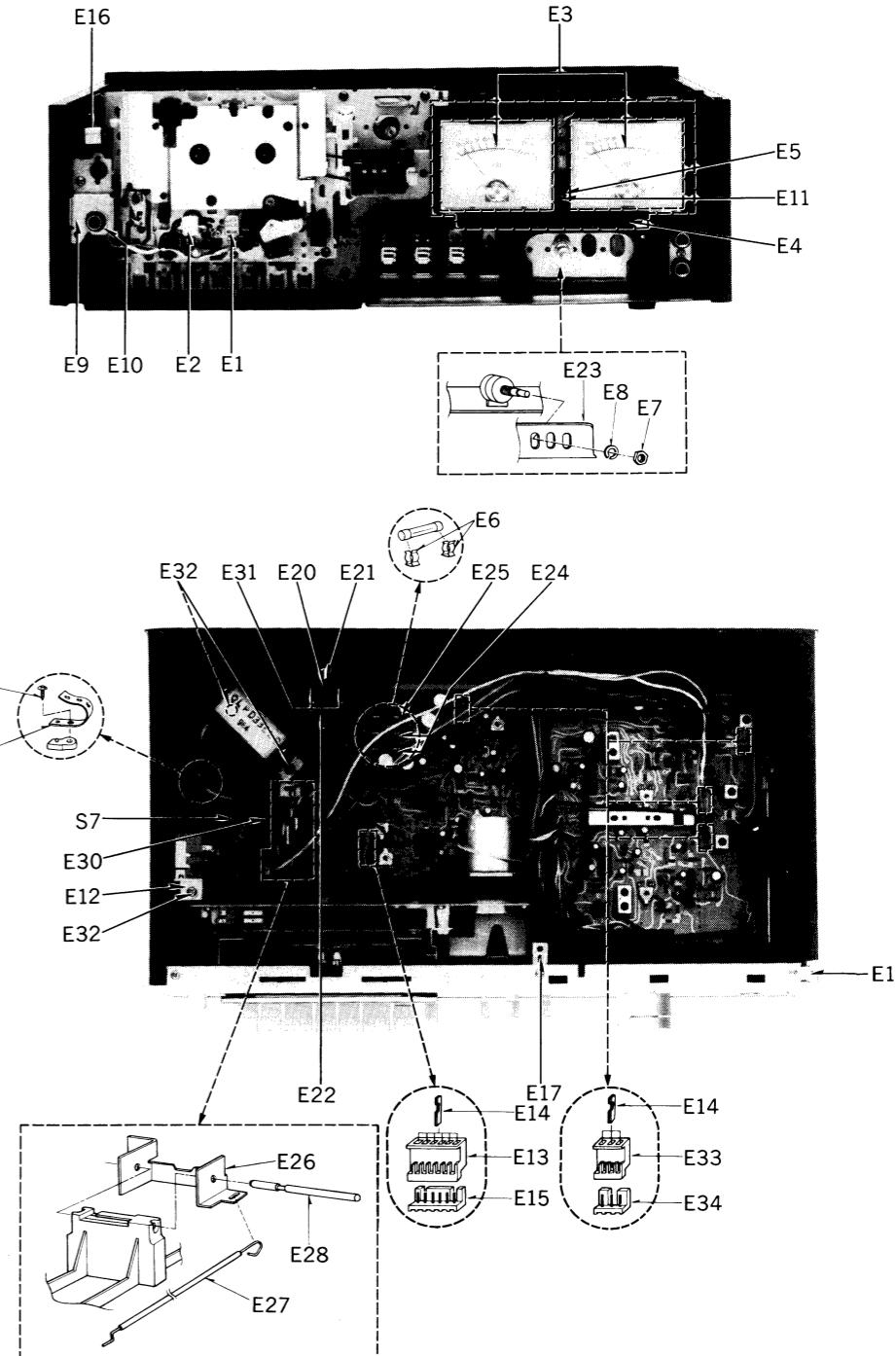
CABINET PARTS



Ref. No.	Part No.	Part Name & Description
CABINET PARTS		
G1	QYP0826 "Silver Type" (QYP0842)	Front Panel Assembly
G1-1	"Black Type"	Front Panel Assembly
G2	QKJ0328	Stopper
	QYF0357	Cassette Lid Assembly
	"Silver Type" (QYF0358)	Cassette Lid Assembly
G3	"Black Type"	
G4	QGC1135 QGK2940	Bottom Board Assembly Switch Shelter
	"Silver Type" (QGK2938)	Switch Shelter
G5	"Black Type"	
	QYT0520	Volume Knob-1
	"Silver Type" (QYT0524)	Volume Knob-1
G6	"Black Type"	
	QYT0521	Volume Knob-2
	"Silver Type" (QYT0521K)	Volume Knob-2
G7	"Black Type"	
	QGC1139 "Silver Type" (QGC1139K)	Case Cover
	"Black Type"	Case Cover
G8	QKA1078	Rubber Foot
G9	QGS2636	Main Name Plate *For All European Area Except United Kingdom
G9	■ QGS2637	Main Name Plate *For United Kingdom
G10	XTN3+10B	Tapping Screw $\times 3 \times 10$
G11	XTN4+10B	Tapping Screw $\oplus 4 \times 10$
G12	QXA0637	Push Button Holding Angle
G13	QGO1473	Pause Button
	"Silver Type" (QGO1551)	Pause Button
	"Black Type"	
G14	QGO1474	Record Button
	"Silver Type" (QGO1552)	Record Button
	"Black Type"	
G15	QGO1475	Eject Button
	"Silver Type" (QGO1553)	Eject Button
	"Black Type"	
G16	QGO1476	Playback, Stop Button
	"Silver Type" (QGO1554)	Playback, Stop Button
	"Black Type"	
G17	QGO1477	Fast Forward, Rewind Button
	"Silver Type" (QGO1555)	Fast Forward, Rewind Button
	"Black Type"	
G18	QXB0508	Timer Button Assembly
	"Silver Type" (QXB0616)	Timer Button Assembly
	"Black Type"	
G19	XUC25FT	Stop Ring 2.5φ
G20	XUC4FT	Stop Ring 4φ
G21	QMN2382	Push Button Shaft-A
G22	QMN1861	Push Button Shaft-B
G23	QYF0360	Cassette Holder Assembly
G24	QBP1818	Holder Spring
G25	XTN26+5B	Tapping Screw $\oplus 2.6 \times 5$
G26	XUC3FT	Stop Ring 3φ
G27	QBW1641	Lid Spring

NOTE: S indicates that only parts specified by the manufacturer be used for safety.

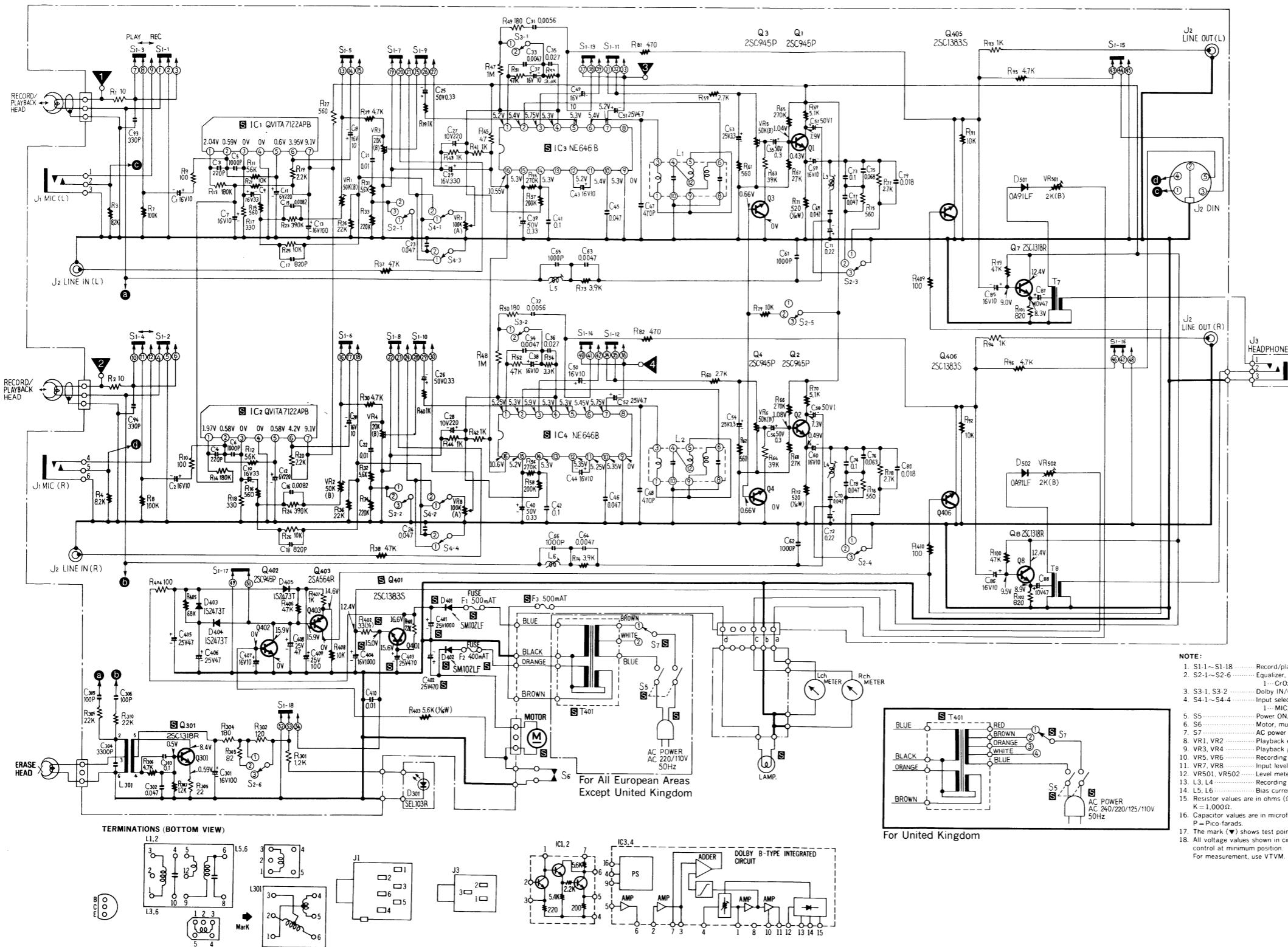
ELECTRICAL PARTS LOCATION



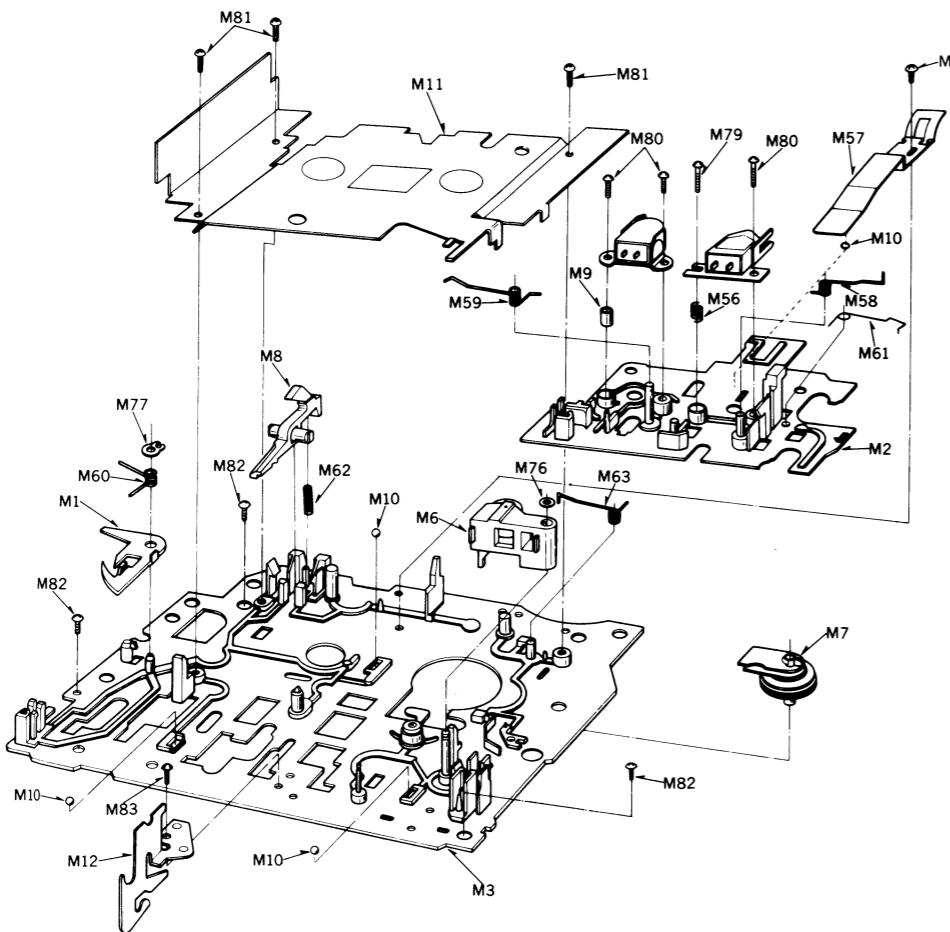
SCHEMATIC DIAGRAM MODEL RS-M10

NOTE: RESISTORS
 ERD...Carbon
 ERG...Metal-oxide
 ERO...Metal-film
 ECF...Ceramic
 ERQ...Fuse type metallic
 ERC...Solid
 ECQE...Polyester
 ERF...Cement
 ECQF...Polypropylene
 ECE...Non polar electrolytic
 ECQ...Non polar electrolytic
 ECQS...Polystyrene
 ECS...Tantalum

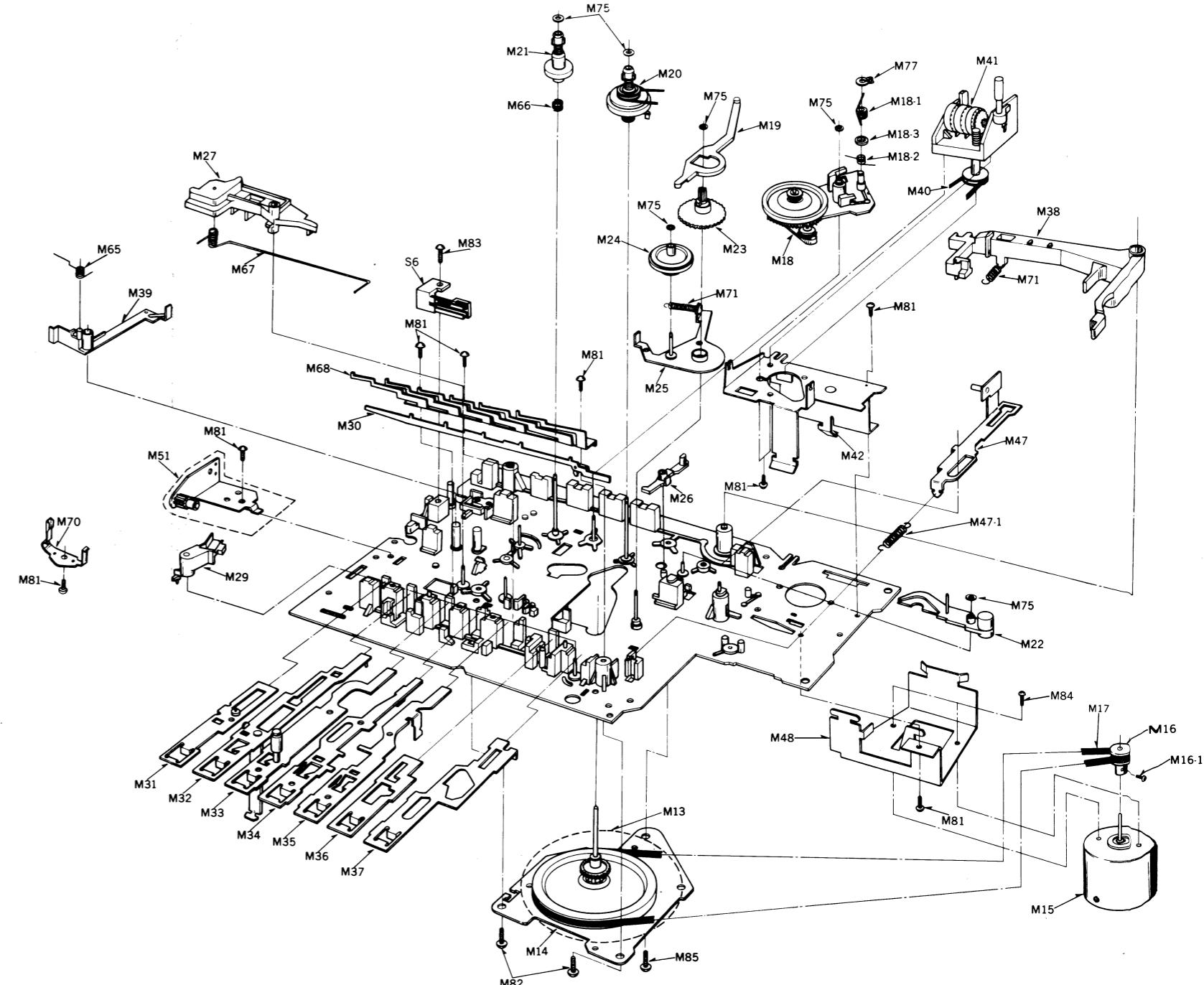
CAPACITORS
 ECG...Ceramic
 ECK...Ceramic
 ECC...Ceramic
 ERX...Metal-film
 ERQ...Ceramic
 EQQM...Polyester
 ECR...Solid
 ECQE...Polyester
 ECE...Electrolytic
 ECQ...Non polar electrolytic
 ECQS...Polystyrene
 ECS...Tantalum



EXPLODED VIEWS



Ref. No.	Part No.	Part Name & Description	Ref. No.	Part No.	Part Name & Description
MECHANICAL PARTS					
M1	QML2898	Pause Lock Plate	M36	QMR1622	Stop Rod-A
M2	QMK1612	Head Base Plate	M37	QMR1621	Eject Rod-A
M3	QKK1951	Upper Base Plate Assembly	M38	QML3038	Switch Arm
M4	QML3047	Obstruction Lever	M39	QML3287	Brake Lever
M5	QML3048	Driving Lever	M40	QDB0240	Counter Belt
M6	QXL1057	Pressure Roller Lever Assembly	M41	QXC0040	Tape Counter
M7	QXI0098	Takeup Idler Assembly	M42	"Silver Type" (QXC0041)	"
M8	QML3051	Erase Safety Lever	M43	"Black Type" (QMA3676)	"
M9	QMC0061	Erase Head Spacer	M44	QXR0403	Eject Angle
M10	QDK1012	Steel Ball 2.5φ	M45	GBT1619	Idler Spring
M11	QMF2063	Chassis Cover	M46	QMA3414	Motor Angle
M12	QMA3169	Shaft Reinforcement Angle	M47	QXG1040	Damper Gear Assembly
M13	QXF0131	Flywheel Assembly	M48	QBN1515	Connection Spring
M14	QKH0239	Flywheel Retainer Assembly	M49	QBC1278	Head Spring
M15	MMC642HYA	Motor	M50	QBP1841	Head Base Plate Pressure Spring
M16	QXP0572	Motor Pulley Assembly	M51	QBN1488	Pressure Roller Spring
M16-1	XSN2+3	Screw 2×3	M52	QBN1481	Playback Spring
M17	QDB0236	Flywheel Belt	M53	QBN1480	Pause Lock Spring
M18	QXL1136	Fast Forward Arm Assembly	M54	QBN1514	Timer Spring
M18-1	QBN1517	Fast Forward Spring	M55	QBC1193	Safety Lever Spring
M18-2	QBN1559	Fast Forward Arm Spring	M56	QBN1513	Idler Spring
M18-3	QMC0080	Collar	M57	QBP1723	Click Spring
M19	QML3040	Cam Lever	M58	QBN1574	Brake Spring
M20	QKD0067	Takeup Reel Table Assembly	M59	QBC1338	Back Tension Spring
M21	QXD0084	Supply Reel Table Assembly	M60	QBN1555	Pause Spring
M22	QXL1055	Auto-Stop Lever Assembly	M61	QBP1664	Operation Rod Spring
M23	QDG1096	Cam Gear	M62	QBP1662	Lock Rod Spring
M24	QKG1026	Auto-Stop Gear Assembly	M63	GBT1682	Lock Holding Spring
M25	QXL1037	Gear Lever Assembly	M64	QBW2008	Snap Washer
M26	QML3042	Auto-Stop Obstruction Lever	M65	QBW2046	"
M27	QML3217	Pause Lever	M66	XUB4FT	Stop Ring C4φ
M29	QML3124	Lock Release Arm	M67	QHQ1226	Screw
M30	QMR1735	Lock Rod Assembly	M68	XSN2+10	Screw 2×10
M31	QXR0342	Pause Rod Assembly	M69	XTN26+5B	Tapping Screw 2.6×5
M32	QXR0465	Record Rod Assembly	M70	XTN3+10B	Tapping Screw 3×10
M33	QXR0420	Playback Rod Assembly	M71	XTN26+8B	Tapping Screw 2.6×8
M34	QMR1624	Rewind Rod-A	M72	XSN26+3	Screw 2.6×3
M35	QMR1623	Fast Forward Rod-A	M73	XTN3+25B	Tapping Screw 3×25



WIRING CONNECTION DIAGRAM MODEL RS-M10

NOTE: **S** indicates that only parts specified by the manufacturer be used for safety.

Ref. No.	Part No.	Part Name & Description
TRANSISTORS		
Q1, 2, 3, 4	2SC1684	Transistor
Q7, 8	2SC1318	"
Q301	2SC1318	"
Q401	2SC1383	"
Q402	2SC1684	"
Q403	2SA564	"
Q405, 406	2SC1383	"
DIODES & RECTIFIERS		
D301	SEL103R	Light Emitting Diode
D401, 402	S M102	Rectifier
D403, 404, 405	QVD1S2473T	Diode
D501, 502	OA91	"
INTEGRATED CIRCUITS		
IC1, 2	QVITA7122APB	Integrated Circuit
IC3, 4	NE646B	"
TRANSFORMERS		
T7, 8	QLT2D26X	Headphone Transformer
T401	QLPD33ELC	Power Transformer *For All European Area Except United Kingdom
QLPA44ELC	QLPA44ELC	Power Transformer *For United Kingdom
COILS		
L1, 2	QLM927	MPX Filter
L3, 4	QLM0333	Record Equalizer Coil
L5, 6	QLQC0331	Bias Trap Coil
L301	QLB0188	Bias Oscillation Coil
SWITCHES		
S1	QSS1205T	Slide Switch (Record/Playback Select)
S2	QES1482 "Silver Type"	Lever Switch (Tape Select)
QES1485 "Black Type"	Lever Switch (Tape Select)	
S3	QES1484 "Silver Type"	Lever Switch (Dolby IN/OUT Select)
QES1487 "Black Type"	Lever Switch (Dolby IN/OUT Select)	
S4	QES1483 "Silver Type"	Lever Switch (Input Select)
QES1486 "Black Type"	Lever Switch (Input Select)	
S5	QSW2214	Power Switch
S6	QSB0186	Leaf Switch (Muting Switch)
S7	QSR1409	AC Voltage Select Switch *For All European Area Except United Kingdom
QSR1407	QSR1407	AC Voltage Select Switch *For United Kingdom
JACKS		
J1	QJA0257H	Microphone Jack
J2	QEJ5002S	Line IN/OUT and DIN Jack Assembly
J3	QJA0249C	Headphone Jack

